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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,790	04/14/2004	Mitsuaki Nishie	50395-268	4674
20277	7590	04/22/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			KALIVODA, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,790

Applicant(s)

NISHIE ET AL.

Examiner

Christopher M. Kalivoda

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 4-7, 11, 12 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/20/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Paragraph 3, lines 1-4, paragraph 004, lines 1-4 and paragraph 6, the last sentence all appear to be a translation and read awkwardly. In addition, in paragraph 4, it appears the parts are installing components.

In paragraph 9 and 10, line 1, the word "includes" should be "include".

In paragraph 29, line 4, the housing is referenced as 11. However, in line 6, a groove is referenced as 11.

In paragraph 34, line 7, the electronic device is referenced as "25". However, from the drawings and para 29, line 2, it appears this should be "5".

In paragraph 36, lines 2-3, the other electronic device is referenced as 27. However, from the drawings, and paragraph 34, line 4, it appears this should be "29".

In paragraph 37, line 2, there appears to be missing text between "enables to".

In paragraph 40, line 5, the word "us" should be "is".

In paragraph 44, line the reference sign "35" is not in the drawings. This may be reference sign "53".

In paragraph 46, line 3, the word "thorough" should be "through". In addition, in line 8, the lens is referenced as 47b. However, the incident surface is also referred to using 47b. From the drawings and text one line above, it appears the second reference to 47b should be "47a".

In paragraph 51, line 5, the tip of the fiber is referenced as 57e. However, in figure 8, the tip appears to be "57c"

In paragraph 59, line 5, the word "ad" should be "and". In line 7, the third substrate is referenced as 133. However, from the figure and paragraph 58, line 3, it appears the third substrate should be referenced as 137.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference sign 11g in Figure 1, 2, 3A-C, 4

Reference sign 27a in Figure 2, 4

Reference sign 16 in Figure 4,

Reference signs 43, 51, 51a,b,e,g, 61, 62, 62a,b,c,d,

Reference sign 51 in Figure 6,

Reference signs 91,91b,c, 95 in Figure 8,

Reference sign 115 in Figure 115,

Reference signs 133a,135a,137a,155a, and 159 in Figure 12.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character 59 in Figure 5 has been used to designate both a fiber and faces of the v-groove.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 4-7,11,12 and 14 are objected to because of the following informalities:

Regarding claim 4, line 4, it appears there is missing text just before the third occurrence of the word "grooves". In line 5, it appears there is missing text just before the word "grooves".

Regarding claim 5, line 2, the claim references a second groove but there is no reference to a first groove in claim 1 or 2.

In claim 6, line 2, there appears to be a period "." after the second occurrence of the word "said". This may be a stray mark on scanned copy of claims and not original copy. In line 4, there is no prior reference to "said first groove". Also in line 4, there is missing text just before the third occurrence of the word "grooves". In line 5, it appears there is missing text just before the word "grooves".

Regarding claim 7, line 3, the claim references a third groove but there is only reference to a second groove in claim 5 (see above claim 5 objection) and also no first groove.

In claim 11, line 3, the word "constitutes" should be "constitute".

In claim 12, line 4, the word "constitutes" should be "constitute".

In claim 14, line 16 the word "constitutes" should be "constitute".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 6,808,316 to Nakanishi et al. in view of Sasaki et al., U.S. Patent 5,960,141.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed

in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding independent claim 1 as claimed, Nakanishi et al. teach an optical module comprising a first substrate (Fig 12, ref sign 42), an electronic device (Fig 12, ref sign 90) provided on the substrate, an optical device (Fig 12, ref sign 81) electrically connected (Fig 12, ref sign 70) to the electronic device, a fiber assembly (Fig 15, ref sign 62) optically coupled to the optical device, a housing (Fig 15, box like structure surrounding module) for securing the fiber assembly, the housing has an opening (Fig 15, open area where modules are located) and the substrate is in the opening (Fig 15).

However, the reference is silent with respect to the housing having a cavity for enclosing the electronic device and optical device.

Sasaki et al. describe a housing having a cavity for enclosing an electronic device and optical device (Fig 7 ref sign 56) since the package is covered by a lid.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Nakanishi et al., to include a lid so the housing has a cavity for enclosing the electronic and optical device.

The motivation for such an improvement is to hermetically seal the optically coupled portion so as to prevent corrosion due to moisture, oxygen and condensation (col 2, lines 15-20).

Regarding claim 2, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 1 as described above. Furthermore, in Nakanishi et al., the housing has a base (Fig 15, box like structure surrounding housing module and cover/lid as described above). The base has a mounting region for mounting the optical device (Nakanishi et al, Fig 15, ref sign 10) and in Sasaki et al., the cover has a cavity with the base and cover securing the fiber assembly (Fig 7, ref sign 62) and the base and cover secure the fiber there between (Fig 7, ref sign 58, 18 and 6).

Regarding claim 3, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 2 as described above. Furthermore, in Sasaki et al., the cover has a first groove having a pair of surfaces for securing the fiber assembly (Fig 7, ref sign 58).

Regarding claim 4, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 3 as described above. Furthermore, in Nakanishi et al., the fiber assembly includes an optical fiber (Fig 15, ref sign 61) and ferrule (Fig 15, ref sign 62) for protecting the optical fiber. There is a groove that has a pair of grooves (col 11, lines 36-37 with shallow and deep grooves) with one of the grooves securing the ferrule and one of the grooves securing the fiber (col 11, lines 37-39 and Fig 15).

Regarding claim 5, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 2 as described above. Furthermore, in Nakanishi et al., the base has a groove

with a pair of surfaces for securing the fiber (col 11, lines 36-37) since the grooves are v-grooves.

Regarding claim 6, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 5 as described above. Furthermore, in Nakanishi et al., the fiber assembly includes an optical fiber (Fig 15, ref sign 61) and ferrule (Fig 15, ref sign 62) for protecting the optical fiber. There is a groove that has a pair of grooves (col 11, lines 36-37 with shallow and deep grooves) with one of the grooves securing the ferrule and one of the grooves securing the fiber (col 11, lines 37-39 and Fig 15).

Regarding claim 7, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 5 as described above. Furthermore, in Nakanishi et al., the optical device is a light receiving device (col 15, line 66-col 16, line 4 and Fig 15, ref sign 81). The base has a groove extending from the second groove (Fig 13, groove following groove securing fiber 61) and has a light reflecting surface (Fig 13, slanted surface where light arrow reflects) with the light receiving device (Fig 13, ref sign 82) receiving light emitted from the fiber assembly (Fig 13 arrow) and reflected by the light reflecting surface.

Regarding claim 8, Nakanishi et al. in view of Sasaki et al teach the limitations of claim 1 as described above. Furthermore, in Nakanishi et al., the optical module has a bench (Fig 12, ref sign 30) for mounting the optical device and the housing includes a base (Fig 15, box like structure surrounding module) with the base having an opening (Fig 15, open area where modules are located) for receiving a portion of the bench. The cover has a cavity as described above and the bench and cover secure the fiber as described above.

Allowable Subject Matter

Claims 9, 10 and 13 allowed.

The following is a statement of reasons for the indication of allowable subject matter: Regarding independent claim 9, a review of prior art failed to make obvious, disclose or fairly suggest an optical communication apparatus comprising an optical module including a wiring member for connecting the first substrate of the optical module to the second substrate in addition to the accompanying features of the claim.

Claims 10 and 13 are allowed by virtue of their dependence upon claim 9. Claims 11, 12 and 14 would also be allowable by virtue of their dependence upon claim 9 but are currently objected to for minor informalities.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,005,939 to Arvanitakis et al. can be used to reject claim 1 since the inventors teach an optical module comprising a first substrate (Fig 2, ref sign 27), an electronic device (Fig 2, ref sign 65) provided on the substrate, an optical device (Fig 2, ref sign 31 or 33) electrically connected (Fig 2, ref sign 51) to the electronic device, a fiber assembly (Fig 2, ref sign 77) optically coupled to the optical device, a housing (Fig 2, ref sign 17 and 83) for securing the fiber assembly, the housing has a cavity (Fig 4, ref sign 95) for enclosing the electronic and optical device and an opening leading to the cavity (Fig 2, ref sign 101) wherein the substrate is

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provided in the opening (Fig 2, ref sign 27 and 101).

U.S. Patent 6,309,113 describes an optical module with a substrate, electronic device on the substrate, optical device coupled to the electronic device, fiber assembly and housing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cmk
04/15/2005


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